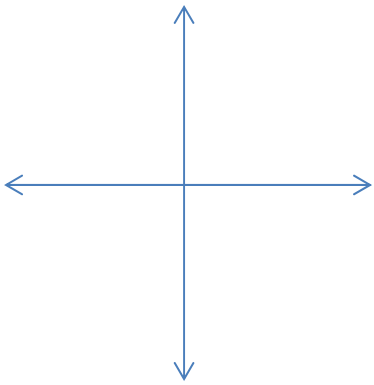
Unit 8 Review – Trigonometry

PART 1 – Angles in Standard Position

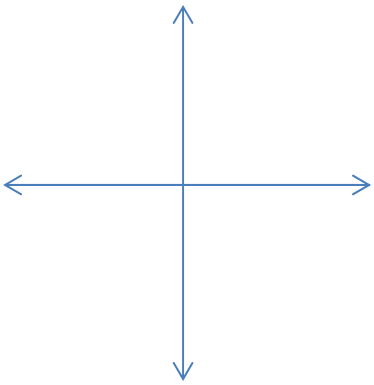
1. Draw and label your two special triangles. Label all three sides and angles.

2. Sketch the following angles in standard position and find their reference angles.

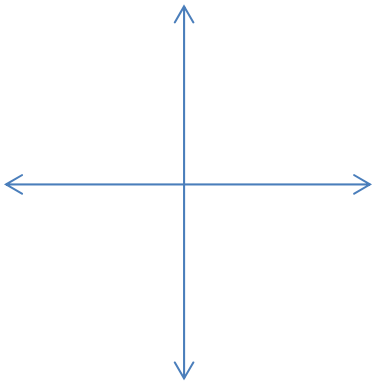
a) $\theta = 150^\circ$



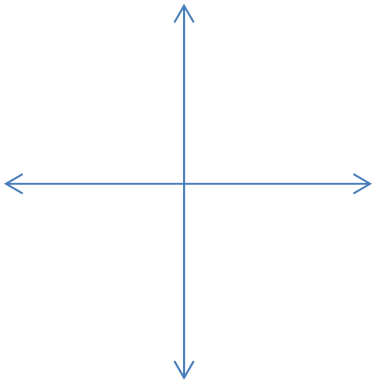
b) $\theta = 215^\circ$



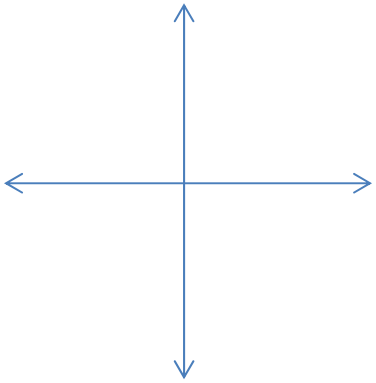
3. Determine the measure of the three other angles in standard position, $0^\circ \le \theta \le 360^\circ$, that have a reference angle of 35°.



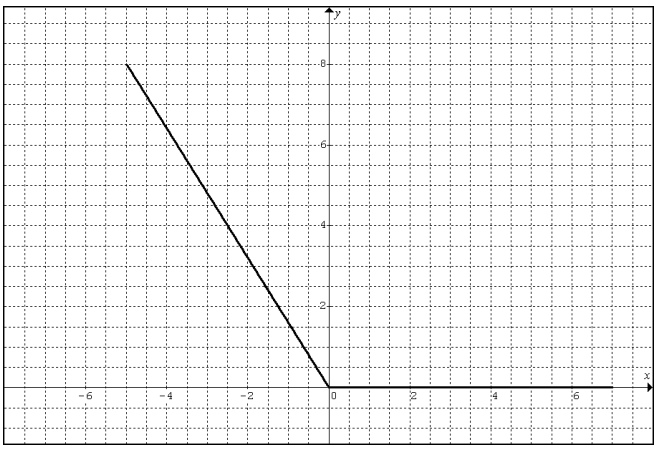
4. Point $P\ (2,-6)$ lies on the terminal arm of angle θ, in standard position. Determine the exact trig ratios for $\sin\theta,\ \cos\theta,$ and $\tan\theta.$



5. Point $P\ (-12,5)$ lies on the terminal arm of angle θ, in standard position. Determine the exact trig ratios for $\sin\theta,\ \cos\theta,$ and $\tan\theta.$

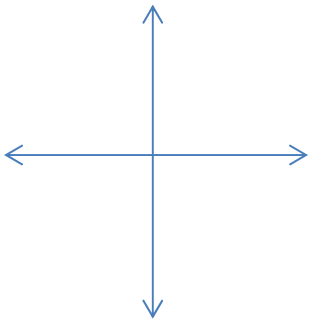


6. Angle θ is exactly 120°. Determine the exact values of the sine, cosine, and tangent ratios of this angle in standard position.

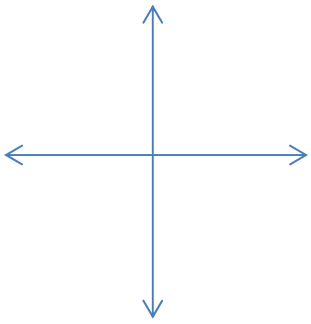


7. Determine the exact value of the following angles:

a) $\sin 150^\circ$

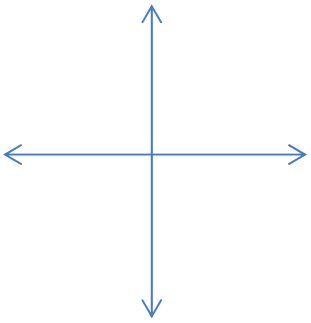


b) $\tan 315^\circ$

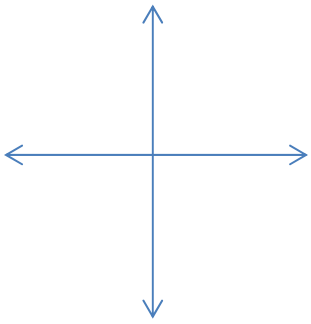


8. . Solve for θ. (Find the values of angle θ.)

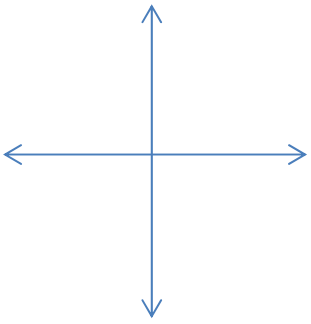
a) $\cos\theta = -\frac{\sqrt{3}}{2},\ 0^\circ \le \theta < 360^\circ$



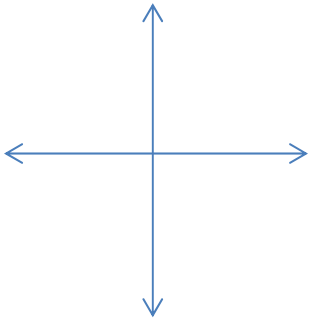
c) $\tan\theta = 1,\ 0° \le \theta < 180°$



b) $\sin\theta = -\frac{1}{2},\ 0° \le \theta < 270°$



d) $\cos\theta = \frac{1}{2},\ 0^\circ \le \theta < 360^\circ$



PART 2 – Sine Law

9. Find side c if, in $\Delta ABC\ \angle A = 35^\circ, \angle B = 88^\circ,\ b = 44cm$

11. Solve the triangle: $\Delta ABC\ \angle A = 39^\circ, a = 10cm,\ b = 14cm$. Round your answers to the nearest unit.

PART 3 – Cosine Law

12. In triangle $PQR:\ p = 17,\ q = 23,\ \text{and}\ r = 25$. Find the measure of angle Q (to the nearest degree).

13. In triangle DEF : $\angle D = 21^\circ,\ e = 27,\ \text{and}\ f = 30$. Find the measure of side d , to the nearest tenth.

More Review: p. 129 # 1- 6, 8-10, 13, 20